

CLAIMS

What is claimed is:

1. A rocker arm assembly for a rear derailleur of a bicycle, the assembly comprising an outer plate having a pivot pin, an inner plate and a pair of idle transmission wheels arranged between the outer plate and the inner plate, wherein the inner plate is made of metallic material and the outer plate is made of a structural fiber fabric incorporated in a plastic material matrix.
2. The rocker arm of claim 1, wherein the plastic material is a thermo set.
3. The rocker arm of claim 1, wherein the plastic material is a thermoplastic.
4. The rocker arm of claim 1, wherein the fabric is a carbon-based fabric.
5. The rocker arm of claim 1, wherein said pivot pin carried by the outer plate is made of metallic material and is fastened to the outer plate by caulking.
6. The rocker arm of claim 1, wherein the outer plate includes an integral element made of a plastic material projecting from an outer face of the plate which carries an adjustment screw co-operating with a wheel rotationally mounted on said pivot pin.
7. The rocker arm of claim 1, wherein said outer plate has a cross-sectional profile which essentially has a shape of a shallow channel.
8. The rocker arm of claim 1, wherein the outer plate is obtained by compression molding.

9. A rocker arm assembly for use on a rear derailleur of a bicycle, the assembly comprising:

an inner plate, made of a rigid metallic material, including first and second tapped holes;

an outer plate having a pivot pin, made of a plastic composite material, including first and second through apertures respectively aligned with the first and second tapped holes, and connected to the inner plate via fasteners passing through the first and second through apertures and first and second tapped holes; and

first and second idle gears positioned between the inner and outer plates and aligned with a respective one of the first and second through apertures.

10. The rocker arm assembly of claim 9 wherein the composite material is structural fiber fabric incorporated in a plastic material matrix.

11. The rocker arm assembly of claim 10 wherein the plastic material is a thermo set, and the composite material is compression molded.

12. The rocker arm assembly of claim 9 wherein the metallic material is aluminum alloy.

13. The rocker arm assembly of claim 9 wherein the outer plate further includes an essentially U-shaped cross section.

14. The rocker arm assembly of claim 13 wherein the outer plate further defines a plurality of apertures therethrough.

15. A bicycle derailleur rocker arm assembly comprising:  
a rigid metallic inner plate having first and second tapped holes;

a plastic composite material outer plate having first and second through apertures respectively aligned to oppose the first and second tapped holes and a pin which extends away from the inner plate;

first and second idle gears positioned between the inner and outer plates and aligned with a respective one of the first and second through apertures;

fasteners passing through the first and second through apertures and engaging a respective one of the first and second tapped holes;

a regulation wheel mounted on the pin; and

a return spring that connects with the regulation wheel and rotates the assembly about the pin.

16. The assembly of claim 15 wherein the composite material is comprised of a structural fiber fabric in a plastic matrix.

17. The assembly of claim 16 wherein the plastic matrix is a thermo set.

18. The assembly of claim 15 wherein the composite material is compression molded.

19. The assembly of claim 15 further comprising a worm screw for varying the return spring's tension.

20. The assembly of claim 15 wherein the outer plate further includes an essentially U-shaped cross section.

21. The assembly of claim 15 wherein the metallic material is an aluminum alloy.